

**TO:** Interested Parties  
**FROM:** John Hogan  
**DATE:** 30 November 2004  
**SUBJECT:** Summary of Changes for the 2004 Washington State Energy Code

On 12 November 2004, the Washington State Building Code Council (WSBCC) adopted the 2004 Washington State Energy Code. The WSBCC website (...) contains the language and a summary of the WSBCC actions. (The revisions will be formally published in the next several months in the Washington State Register (<http://slc.leg.wa.gov/wsr/register.htm>, then "index", then "Building Code Council"). Barring any action by the Washington State Legislature, the 2004 State code changes take effect statewide on 1 July 2005.

This document contains a summary of those changes adopted for the 2004 Washington State Energy Code. A complete version of the 2004 Washington State Energy Code containing all the changes will be published by the Washington Association of Building Officials, but is not likely to be available until Spring 2005. For further information, contact:

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[http://www.halcyon.com/wabo/order\\_bo.htm](http://www.halcyon.com/wabo/order_bo.htm)  
(look under "Washington State Codes, Procedures, and Guidelines)

You can download an electronic version of this summary and also obtain information on the Seattle amendments to the Washington State Energy Code at the Seattle Energy Code website at: <http://www.seattle.gov/dpd/energy>.

## SUMMARY OF CHANGES FOR THE 2004 WASHINGTON STATE ENERGY CODE

Below is a section-by-section summary of changes for the 2004 Washington State Energy Code. For residential (Group R occupancy) requirements, there is a single change that addresses cavities that are partially-filled with insulation. For nonresidential (other than Group R occupancy) spaces, changes to the building envelope and mechanical requirements bring them closer to ASHRAE/IESNA Standard 90.1-2001, lighting changes address occupancy sensors and alterations. Many of the nonresidential changes incorporated requirements that had been previously adopted into the Seattle Energy Code.

### RESIDENTIAL (Group R Occupancy)

<u>Section</u>	<u>Subject</u>	<u>Summary</u>
502.1.4.6	Wall insulation	Adds an exception for a wall cavity to remain unfilled or partially filled with insulation provided (1) that the Target UA approach is used for compliance and (2) that any insulation installed in a partially filled cavity is not included in the performance calculations.

### NONRESIDENTIAL (Other than Group R Occupancy)

<u>Section</u>	<u>Subject</u>	<u>Summary</u>
Table 10-6		Revises default table for nonresidential glazing to add other frame and low-e options and to revises the values for overhead glazing to correspond with the changes to prescriptive criteria in Tables 13-1 and 13-2. <i>(Incorporates 2001 Seattle Energy Code amendment.)</i>
1132.3	Lighting alter.	Requires change of use per Table 15-1 to comply with lighting W/sf, applies 60% threshold on a space-by-space basis, and clarifies requirements for occupancy sensors and for controls in new enclosed spaces. <i>(Similar to 2001/2002 Seattle Energy Code amendments.)</i>
1322	Opaque envel.	Revises exception with pre-calculated trade-offs for edges of intermediate floor slabs which are uninsulated or that do not comply with the wall insulation requirements. <i>(Incorporates 2001 Seattle Energy Code amendment.)</i>
1331	Target UA	Deletes exception for 1989 version of EnvStd. <i>(Incorporates 2001 Seattle Energy Code amendment.)</i>
Tables 13-1 & 13-2		Revises building envelope criteria to be no less stringent than ASHRAE/IESNA Standard 90.1-2001 (i) revise opaque roof U-factors for consistency with default Table 10-7, (ii) revise mass wall criteria for consistency with ASHRAE/IESNA Standard 90.1-2001, (iii) revise frame wall criteria to reduce thermal bridging and be no less stringent than ASHRAE/IESNA Standard 90.1-2001, (iv) revise fenestration requirements so that U-factor and SHGC requirements together provide stringency

		closer to ASHRAE/IESNA Standard 90.1-2001, (v) clarify roof and below-grade wall categories. (Similar to but less stringent than 2001 Seattle Energy Code amendment.)
1413.3	Economizer	Limits exception to water-cooled water chillers with waterside economizer. (Incorporates 2001 Seattle Energy Code amendment.)
1413.4	Humidification	Allows isothermal humidification in certain cases.
1423	Economizer	Revises thresholds to 20,000 Btu/h for units installed outdoors or in a mechanical room adjacent to the outdoors, and to 54,000 Btu/h for other units. (Similar to 2001 Seattle Energy Code amendment.)
1433	Economizer	Requires air economizer for all systems with (i) revised exception 1 only applicable to units included in Tables 14-1A, 14-1B, & 14-1D that have an efficiency that is 10% higher than the values in those tables (small equipment is no longer exempt, unless it complies with this criteria); also total capacity of exempt units in a building raised to 40 tons or 20% of the building's air economizer capability; exemption does not apply to unitary cooling equipment installed outdoors or in a mechanical room adjacent to the outdoors; (ii) new exception 6 with pre-calculated alternate for water source heat pump systems requiring 60% air economizer, heat pumps with 15% higher heating and cooling efficiencies, high-efficiency central boilers, and heat recovery to preheat the outside air supply; (iii) new exception 7 for Group R occupancy consistent with 1423.
1513.6	Ltg.controls	Requires automatic shutoff controls for lighting in <u>all</u> buildings over 5,000 ft <sup>2</sup> for consistency with ASHRAE/IESNA Standard 90.1-2001, Section 9.2.1.1; requires occupancy sensors for small offices, meeting and conference rooms, and school classrooms; requires that occupancy sensors have a manual switch to turn off the lights so that occupants have the ability to turn off part or all of the lights when not needed to avoid unnecessary wasting of energy. (Incorporates 2001 Seattle Energy Code amendment.)
1521	Pres.ltg.option	Revises Prescriptive Lighting option to achieve installed lighting wattages comparable to the Lighting Power Allowance option in Section 1530, while maintaining the original intent of market transformation by requiring electronic dimming ballasts with photocell or programmable dimming control all zones (perimeter and interior). Companion change to Table 15-1. (Incorporates 2001 Seattle Energy Code amendment.)
Table 15-1		Revises the Lighting Power Allowance table to reflect current practice: office, police and fire stations at 1.0 W/sf, laboratories at 1.8 W/sf. Surveys of recent construction have little additional task lighting. Part of this is in response to a need to minimize glare on computer

monitors.

*(Incorporates 2001 Seattle Energy Code amendment.)*